REMARKS

The courtesies extended by Examiner Stuart Hendrickson to the inventor, John Hatleberg, and his representative, Allan Fanucci, during a telephone interview on December 20, 2006 are noted with appreciation. The comments appearing herein are essentially the same as the substance of the comments that were presented and discussed with the Examiner. In addition to the description that follows, the interview included a discussion regarding the relationship between synthetic and natural diamonds as well as the potential for marketing and selling articles made in accordance with the invention, and further details are not required here since they do not relate to the patentability of the claims.

Claims 1-3, 5-13, 15, 17 and 19-20, as amended, and new claims 21-23 appear in this application for the Examiner's review and consideration. Independent claims 1, 15 and 17 were amended to further define the invention, with claim 15 emphasizing the article as a combined gift. In particular, these claims were amended to add further tangible steps to the method, such as by reciting that the gift is of organic plant material, the gift is selected to symbolize the feelings of the gift-giver toward the recipient, and that the organic plant material of the gift is converted into a synthetic diamond by initially converting the organic material of the gift into carbon or a carbon-containing compound that is suitable for preparing a synthetic diamond, and then converting the carbon or carbon-containing compound under suitable pressure and temperature conditions to form a gem quality synthetic diamond. These claims were also amended to recite a connection between the color of the synthetic diamond and the color of the gift. Support for these changes appear in the specification and in original claims 2, 4, 16 and 18-19, as well as in the last paragraph of the specification on page 15. Claims 2-3 have been amended to be consistent with amended claim 1, with claim 3 being amended into two separate claims, namely claims 2 and 3. This is supported in the specification and by claim 19 as originally filed. Also, claims 4, 14, 16 and 18 have been cancelled. It is respectfully submitted that these changes do not introduce new matter so that they all should be entered at this time.

Claims 3-7, 15-17, 19 and 20 were rejected under 35 USC 112, second paragraph, as allegedly failing to comply with the written description requirement.

In response, applicant's amendment to claim 1 now further defines the process used to transform the organic material into a synthetic diamond. The amended claim language clearly recites the necessary process steps that are disclosed in the specification for accomplishing this. As explained in the specification, the organic material of the gift is first converted into the necessary starting material to make the synthetic diamonds. While a form of carbon is required, solid forms such as graphite or gaseous forms such as methane can be used. The most preferred material is a carbon source that is obtained in an amorphous form that has been subjected to extensive graphitization, e.g., graphite. Thereafter, the graphitized amorphous carbon is forwarded to the appropriate synthetic diamond forming equipment for formation of the synthetic diamond. For clarity, the separate carbon sources are now recited in different claims.

A number of manufacturing techniques utilizing different types of equipment are known to skilled artisans, as evidenced by US patents such as 6,270,548, 5,908,503 and 5,503,104 that disclose techniques for preparing synthetic diamonds from a source of carbon, so that further detailed disclosure are not necessary to practice the invention. The skilled artisan is most likely aware of additional techniques that can be used. The applicant did confirm that synthetic diamonds according to the present methods have been synthesized and that they are found to be of gem quality and good appearance. Also, different colors can be made by conventional techniques. In view of the above, it is respectfully submitted that the claims fully comply with the written description requirement so that this rejection should be withdrawn.

Before addressing the prior art rejections, it is important to note that the invention is not directed to a known process, but instead, is directed to a method for making a more permanent remembrance from a gift that includes organic plant material. The gift has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient, but the beauty of the gift deteriorates and is lost over time. Thus, the present method comprises transforming the ephemeral beauty of the gift to a more permanent or eternal manifestation that symbolizes the feelings of the gift-giver toward the recipient in a gem quality synthetic diamond. It also combines the gift of organic plant material and diamond in a useful and creative way to enhance the importance and significance of the diamond.

This is much more than the practice of a known process for making synthetic diamonds. One difference is in the selection of the starting material, which in the present invention is a gift that includes organic plant material. This would include flowers, such as roses, tulips, daffodils, carnations, chrysanthemums, lilies, and any others that can be given alone or in a bouquet. Due to their symbolism of love as explained in the specification, roses are the preferred material. The invention thus allows a gift that has ephemeral beauty and symbolizes the feelings of a gift-giver toward a recipient to be converted into a permanent or eternal manifestation that symbolizes the feelings. While flowers will eventually die, transforming them into a synthetic diamond enables the gift to be held by the recipient for a much, much longer time. Furthermore, by connecting and layering the symbolism of love from a gift of roses (or other flowers) upon the synthetic diamond, its importance and desirability as a valued gift increases in stature when compared to natural or other synthetic diamonds. In addition to enhancing the stature of synthetic diamonds as a desirable product, this invention also avoids fostering negative feelings that may be generated from the mining and collection of natural diamonds .

Turning now to the rejections, Claims 1-20 were rejected under 35 USC 102(e) as being unpatentable over VanderBeisen et al. US patent publication 2003/0017932. Applicant traverses this rejection.

VanderBeisen discloses a novel synthetic gem comprising elements recovered from complete or partial human or animal remains. The invention also includes the process of manufacturing synthetic gems comprising carbon from a vertebrate by cremating human or animal remains to produce carbon in a particulate and gaseous form. The carbon is then filtered using a conventional filtering technique. The carbon and other elements are then purified and graphitized using a Halogen Purification technique. The gems are then created using conventional sublimation techniques. The synthetic gems may be faceted and polished utilizing conventional faceting and polishing techniques. The gems may also utilize a conventional marking system.

This patent is also not relevant to the present claims in light of the previous explanation. VanderBeisen relates to a method for synthesizing diamonds from human remains. There is absolutely no connection between the use of such material to represent a gift nor is there any link between the starting material and the final diamond (i.e., temporal and permanent gifts). In contrast, the present invention has this link or connection between the concept of selecting a gift of flowers or other organic plant material and then converting the flowers into a diamond so that the gift is permanent. Certainly, a mass cremated animal remains is not a gift, nor is it organic plant material as claimed.

Like in the present invention, this patent utilizes known process technology to manufacture the synthetic diamonds. This further demonstrates that the represent claims are enabled to a skilled artisan. While a pyrolyzed carbon source derived from the cremation of animal remains is made into a synthetic diamond, this patent does not recognize the symbolism of making a temporal gift permanent, and for that reason does not use a starting material that is a gift of organic plant material or that would be considered as a gift of organic plant material that manifests the feeling of the giver towards the recipient.

Yet another distinction is that, in the present invention, the synthetic diamond is formed with a color that is the same as that of the gift. This enables the recipient select the color of the diamond based on the selected color of the flowers or roses that were contemplated as the gift. This creates a connection and more complete remembrance of the gift by the recipient. The desired color of the diamond can be obtained by adding trace elements or dopants to the graphite powder of the organic plant material or by interference of the crystal lattice. Thus, the symbolism of a red diamond as representing a gift of red roses creates further importance and significance to the diamond. For all these reasons, it is believed that the rejection based on VanderBeisen has been overcome and should be withdrawn.

Claims 1, 2, 4, and 8-15 were rejected under 35 USC 102(b) as being anticipated or under 35 USC 103(a) as being obvious over US patent 6,030,596 to Vilella Jirau, either alone or in combination with applicant's alleged admissions. Applicant traverses this rejection.

Vilella Jirau discloses a method for making diamonds by heating a heterogeneous dispersion of carbon made by pyrolysis of organic material and copper metal in a convenient pressure vessel while maintained at a pressure of 100,000 psi. It is disclosed that the copper content of the reacting mass should be maintained within 15% of the total for best results.

This patent is also not relevant to the present claims in light of the previous explanation. Vilella Jirau simply relates to a method for synthesizing diamonds from carbon by utilizing copper as the solvent and carbon produced by the pyrolysis of an organic compound, such as a carbohydrate like household sugar, as the solute. Under laboratory conditions, in an assemblage where one of the parameters is an applied pressure of 100,000 pounds per square inch, copper behaves like a solvent which favors the crystallization of carbon into the cubic system well under the parameters of heat, pressure and time established by other patented processes or thermodynamic considerations. Like the present invention, this patent utilizes known process technology to manufacture synthetic diamonds, but uses sugar and copper to facilitate such manufacture. Vilella Jirau is not making gem quality synthetic diamonds for jewelry applications, but instead is creating industrial diamonds which are not of high clarity or beauty. The only similarity to the present invention is that carbon is pyrolyzed to form a carbon source that can then be made into a synthetic diamond. This patent does not recognize the symbolism of making a temporal gift permanent, and for that reason does not use a starting material that is a gift or that would be considered as a gift that manifests the feeling of the giver towards the recipient.

There is absolutely no connection between the use of flowers or other organic material that represents a gift as the starting material for making a carbon source that can be converted to a synthetic diamond nor is there any link between the starting material and the final diamond. In contrast, the present invention has this link or connection between the concept of giving a gift of flowers and then converting the flowers into a gem quality diamond so that the gift is permanent. As explained in the specification, in one embodiment, the actual flowers that were given as a gift can be converted to diamonds, although it is anticipated that simply giving a diamond that is made from roses or other flowers will be the more common use of the invention. Furthermore, the relation between gifts of flowers or roses and diamonds is clear in that both symbolize the love of the giver towards the recipient. Certainly, a mass of sugar with copper in it is not a gift or remembrance of the type defined in the present application.

In addition, another distinction is that the synthetic diamond of the present invention is formed with a color that is the same as that of the gift. This enables the recipient select the color of the diamond based on the selected color of the flowers or roses that were contemplated as the gift. Vilella Jirau has no such disclosure or teaching, nor would he have any need for such a teaching given that he is making industrial rather than gem quality synthetic diamonds. And while the synthesis methods of Vilella Jirau may be used in the present invention to prepare the synthetic diamonds (for example, by adding copper to graphitized roses), the use of a different starting material and the transformation of an temporal gift to a permanent one with the color of the diamond being the same as that of the gift remain as the primary distinctions that render the present claims patentable.

Finally, regarding applicant's alleged admission, it is true that the basic knowledge for making synthetic diamonds from graphitized material exists, but there is no disclosure of teaching that gifts of organic plant material can be used as starting material for making gem quality synthetic diamonds that embody the gift and that have a color that represents to color of the gift. For all these reasons, the rejections based on Vilella Jirau have been overcome and should be withdrawn.

In view of the above, it is respectfully submitted that all current rejections have been overcome and should be withdrawn. Accordingly, the entire application is believed to be in condition for allowance, early notice of which would be appreciated. Should the Examiner not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues in order to expedite the eventual allowance of this application.

Respectfully submitted,

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